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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,946	11/30/2001	Taeko Hayase	0445-0313P	3991
2292	7590	10/30/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH			COLE, ELIZABETH M	
PO BOX 747			ART UNIT	
FALLS CHURCH, VA 22040-0747			PAPER NUMBER	
			1771	

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/996,946

**Applicant(s)**

HAYASE ET AL.

**Examiner**

Elizabeth M. Cole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-11,14,15,18-20,22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2-4,6-11,14-15,18-20,22-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                      | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

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1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 9-10, 14-15, 18, 22-23 rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000-212866 as set forth in the previous action in view of either of JP 03-279452 or JP 02-112460 and further in view of Textile Glossary definition of cellulosic fibers. JP '866 discloses an airlaid nonwoven comprising thermoplastic fibers having a length of 3-25 mm, a fineness of 0.5-50 denier and a crimp number of 5-30. The fibers may be conjugate fibers. The fibers are present in an amount of from 3-50%. The airlaid nonwoven further comprises 50-97% of cellulosic fibers. See page 6. The nonwoven may be bonded at the crossover points. See pages 29-30. JP '9666 is silent regarding the number of tips of the thermoplastic fibers which are exposed on the surface. However, since JP '866 teaches the same fabric which is made by the same method as the instant fabric and which comprises the same components in the same amounts, it is reasonable to presume that JP '866 would have the same number of tips, since the specification teaches that the tips are provided by forming the material by the particular method and with the particular materials claimed. With regard to the new limitation that the airlaid nonwoven fabric is laminated to a liquid retentive sheet, JP '866 teaches at page 31 that the airlaid nonwoven disclosed by JP '866 can be laminated to another layer such as a cellulosic fabric such as wool, silk, linen or cotton, or to a paper layer. These layers correspond to the claimed liquid retentive sheet. JP '866 differs from the claimed invention because JP '866 does not teach incorporating thin fibers into the wipe, (although JP '866 does teach fusion bonding the conjugate fibers at crossover

points, which corresponds to the limitation regarding the fusion bonding of the thick fibers). Both JP '460 and JP '452 teach that nonwoven wipes which comprise both thick and thin fibers have excellent tensile strength. See abstracts. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated fine fibers into the wipe of JP '866. One of ordinary skill in the art would have been motivated to incorporate the fine fibers into the nonwoven of JP '866 by the expectation that this would form a nonwoven having enhanced strength. With regard to the particular dtex and fiber length, although JP '460 and JP '452 disclose the fine fibers in terms of the diameter rather than the dtex, it appears that the fibers having a diameter of 0.1-8 microns would meet the claim limitation, and with regard to the length of the fibers, it would have been obvious to have selected the fibers so that the lengths of the fine and coarse fibers were similar or the same in order to facilitate the mixing of the two types of fibers. With regard to the limitation that the fabric comprises intersections of thick and thin fibers, since both JP '460 and '452 teach forming wipes from both thick and thin fibers, once the thin fibers were incorporated into the wipe of JP '866 the bonding at crossover points would necessarily be present, especially since JP '866 teaches bonding at crossover points, (pages 29-30). With regard to claim 21, JP '866 teaches 50-97% cellulosic fibers. With regard to claims 22-23, it is noted that JP '866 teaches employing cellulosic fibers. As set forth in the attached Textile Glossary, examples of cellulosic fibers are cotton and regenerated cellulose or rayon. Therefore, since JP '866 teaches cellulosic fibers broadly, then the use of any of the particular types of cellulosic fibers would have been obvious to one of ordinary skill in the art.

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3. Claims 2 and 11, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000-212866 in view of either of JP 03-279452 or JP 02-112460 as applied to claims 1, 9-10, 14-15, 18, 22-23 above, and further in view of WO 01/52713 to Kakiuchi et al as set forth in the previous action. With regard to claim 19-20, WO '713 teaches a detergent comprising an electrolyte which is applied to wipes.

4. Claims 3-4, 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000-212866 in view of either of JP 03-279452 or JP 02-112460 as applied to claims 1, 9-10, 14-15, 18, 22-23 above, and further in view of Kobayashi et al, EP 926,288 as set forth in the previous action.

5. Applicant's arguments filed 12/29/05 have been fully considered but they are not persuasive.

6. With regard to the art rejection, Applicant argues that none of the references teach thick and thin fibers having the claimed length and dtex. However, JP '866 teaches fibers having a length of 3-25 mm and a fineness of 0.5-50 denier which would encompass the claimed dtex of the thick fibers. Applicant argues that JP '866 does not teach bonding at the intersections of the thick and thin fibers. However, JP '866 teaches bonding at the crossover points of the fibers, but does not include the thin fibers. Both JP '460 and '452 teach mixing thin and thick fibers in order to form a cloth having improved tensile strength. Therefore, one of ordinary skill in the art, in view of the teaching of both JP '460 and '452 would have been motivated to include fibers having the claimed fineness in the airlaid nonwoven of JP '866. Once the fibers were present there would necessarily be bonding between the thick and thin fibers so that the sheet

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had structural integrity. One of ordinary skill in the art would have been motivated to make the fine fibers the same general length as the thick fibers which were already present in JP '866 in order to form a nonwoven wherein the two types of fibers could be easily mixed.

7. Applicant argues that JP '866 is silent as to removing soil by scraping or scouring by the thick fibers. However, JP '866 teaches a cleaning sheet which comprises the thick fibers, so whether or not it states that the fibers clean by scraping, since the fibers are present and are used in a cleaning sheet, they would presumably have to function the same way, (by scraping or scouring). Further, since JP '866 teaches a sheet made from fibers having the same length and fineness, the sheet of JP '866 would necessarily have the number of tips.

8. Applicant argues that JP '866 fails to teach the combination of thick and thin fibers with cellulosic fibers. However, JP '866 teaches the combination of thick fibers and cellulosic fibers. Both JP '460 and '452 teach adding the thin fibers as set forth above. Applicant argues that JP '460 and '452 are silent as to the presence of cellulosic fibers. However, JP '866 teaches this feature. JP '460 and '452 provide the teaching of adding the thin fibers to the nonwoven of JP '866 which already has the thick fibers and the cellulosic fibers. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

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9. Applicant argues that there is no motivation to use the thin fibers of the two secondary references in the cleaning sheet of JP '866. However, JP '452 and '460 both teach that the material is useful as a wiper. With regard to the fabrics being meltblown, the abstracts do not seem to say that the fabrics are meltblown. Further, Applicant argues that JP '452 and '460 does not teach the thick fibers. However, JP '866 has the thick fibers.

10. Applicant argues that the two secondary references do not teach the claimed size of the thin fibers. However, with regard to the particular dtex and fiber length, although JP '460 and JP '452 disclose the fine fibers in terms of the diameter rather than the dtex, it appears that the fibers having a diameter of 0.1-8 microns would meet the claim limitation, and with regard to the length of the fibers, it would have been obvious to have selected the fibers so that the lengths of the fine and coarse fibers were similar or the same in order to facilitate the mixing of the two types of fibers.

11. Applicant argues that the secondary references do not teach the dtex of the thick fibers. However, JP '866 already teaches the claimed size of the thick fibers.

12. Applicant argues that JP '866 does not teach the claimed laminated sheet. However, as set forth above, JP '866 teaches this embodiment at page 31 of the translation.

13. Applicant argues that JP '866 does not teach crimping the thin fibers. However, JP '866 does teach crimping the fibers which are used to make the cleaning sheet. Since JP '866 does not teach the thin fibers, it cannot teach crimping the thin fibers. However, since both secondary references teach the thin fibers, it would have been

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obvious to have crimped the added thin fibers, for the same reason that the thick fibers are crimped in JP '866, which is to improve the bulk of the sheet and the bonding of the fibers. See pages 19-20 of the translation.

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

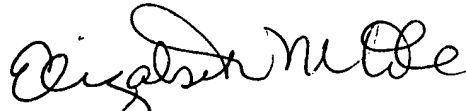
Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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The fax number for all official faxes is (571) 273-8300.

A handwritten signature in black ink, appearing to read "Elizabeth M. Cole". The signature is fluid and cursive, with the first name "Elizabeth" written in a larger, more prominent script than the last name "Cole".

Elizabeth M. Cole  
Primary Examiner  
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e.m.c